

REMARKS

I. Status of Claims

Claims 1-8 are pending in the application. Claim 1 and 8 are independent. By this response, claim 3 is amended to correct a minor editorial error with respect to claim dependency.

Claims 1-3 and 7-8 are rejected under 35 USC 102(b) as allegedly being clearly anticipated by USP 5,113,651 to Kotzan ("Kotzan").

The Office Action objects to claims 4-6 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of their base claims and any intervening claims.

The Applicant respectfully requests reconsideration of these rejections in view of the foregoing amendments and the following remarks.

II. Applicant's Statement of Substance of Examiner Interview

In compliance with M.P.E.P. 713.04, the Applicant provides this Statement of Substance of Interview concerning the telephonic interview conducted April 22, 2008 between Examiner Edwards and Daniel Shanley.

- (A) Exhibits. N/A.
- (B) Claims. Claims 1 and 8.
- (C) Prior art. N/A.
- (D) Amendments. N/A.
- (E) Principal arguments of Applicant. Kotzan does not disclose a controller that limits an amount of air introduced into the internal combustion engine to a predetermined amount when failure in the secondary air supply apparatus is detected by the detector.
- (F) Other matters. N/A.
- (G) Results. Agreement was reached. The Examiner indicated that further search and/or consideration was necessary.

III. Allowable Subject Matter

The Office Action objects to claims 4-6 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims

IV. Pending Claims

Claims 1 and 8, the only independent claims, are rejected under 35 USC 102(b) as allegedly being clearly anticipated by Kotzan.

The Applicant respectfully submits that claim 1 is patentable over the cited references at least because it recites, "...a controller that limits an amount of air introduced into the internal combustion engine to a predetermined amount when failure in the secondary air supply apparatus is detected by the detector."

The Applicant respectfully submits that claim 8 is patentable over the cited references at least because it recites, "...a step of limiting an amount of air introduced into the internal combustion engine to a predetermined amount when failure in the secondary air supply apparatus is detected in the step of detecting failure."

With respect to Kotzan, the Office Action appears to be alleging that Kotzan discloses a control apparatus for an internal combustion engine (10) that is provided with a secondary air supply apparatus (26, 30, 34), which supplies secondary air to a portion of the exhaust system upstream (28) of an exhaust gas control device (14, 16). See, Fig. 1 and col. 3, lines 35-43.

The controller (18) then determines whether a failure has occurred in the secondary air supply apparatus based on the output of an oxygen sensor (24). If a failure is detected, the Office Action asserts that the controller "limits the amount of air introduced into the internal combustion engine to a predetermined amount", citing claim 2, at lines 34-52, of Kotzan. Specifically, it appears that the Examiner is construing the language "correcting the mixture of air and fuel admitted..." to mean the same thing as the claim limitation.

Assuming for argument's sake that it is possible to construe the specified language to include limiting the amount of air introduced into the engine, which the Applicant's maintain it is not, the Applicant respectfully submits that it is not clear how the reference can be construed as

performing the correction of the air-fuel mixture "after the detection of a failure" in the secondary air supply apparatus. For example, the Applicant has reviewed the Kotzan specification, specifically col. 2, line 63, to col. 3, line 26, thereof, and believe it merely discloses that the oxygen content is detected and adjusted in order to maintain a stoichiometric air-fuel ratio. In this process, the amount of air that is introduced is periodically adjusted so that as the engine continues to operate, the oxygen content oscillates between high and low amounts. According to the description in the specification, it appears that the described process, at least to this extent, is part of the normal operation of the engine. Thus, up to this point in the process described by Kotzan, there does not appear to be any indication that the process of detecting and adjusting the oxygen concentration is considered the detection of a fault. Furthermore, Kotzan appears to be silent with respect to how the amount of air is controlled after a fault is detected.

In addition, the Applicant believes that Kotzan is limited to a method of diagnosing a problem in the secondary air supply system, and that the diagnosis of a failure in the system requires several of the above described "adjustment cycles." In particular, in order for the system of Kotzan to determine that a fault has occurred, the detected amount of oxygen must fall short of a certain threshold amount (See col. 6, line 66, to col. 7, line 10) or exceeds a certain threshold amount (See col. 8, lines 23-28) a predetermined number of times. The conditions for determining whether a failure has occurred, i.e., falling short of a certain threshold oxygen concentration or exceeding a certain threshold oxygen concentration, depends on the operational mode of the diagnostic system. Specifically, the system determines that there is a fault in the injection of air into the exhaust path when the oxygen concentration falls short of the threshold amount a predetermined number of times and determines that there is a fault in the diversion of air to the atmosphere if the oxygen concentration exceeds the threshold amount a predetermined number of times.

Thus, in view of the above, it would appear that specification of Kotzan does not support the interpretation of the language in claim 2 asserted by the Office action. Indeed, looking at the claim itself, the determination of a fault does not occur until the last step. As such, the Applicant does not believe that the controller described in the reference limits the amount of air introduced into the internal combustion engine to a predetermined amount "when failure in the secondary air supply apparatus is detected" as required by Applicant's claims 1 and 8.

At most, the Applicant respectfully submits that the apparatus according to Kotzan

merely determines that a fault has occurred, but fails to take any action with respect to the air-fuel ratio once it has been determined that a fault has occurred and fails to limit the amount of air introduced into the engine *after* a failure is detected.

Accordingly, the Applicant respectfully submits that, for at least these reasons, claims 1 and 8 are patentable over the cited references.

V. Conclusion


The Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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